SOUTHERN CROSS GOLD

22 JANUARY 2024

SXG GEOLOGICAL UPDATE FOR THE SUNDAY CREEK PROJECT

Melbourne, Australia — Southern Cross Gold Ltd ("SXG" or the "Company") (ASX:SXG) is pleased to provide a geological update with an outline of vein morphology and continuity at the 100%-owned gold-antimony Sunday Creek Project in the central Victorian goldfields of Australia (Figure 12).

HIGHLIGHTS

- Geological update focusing on vein morphology and continuity at the 100%-owned Sunday Creek Project in Victoria to provide background for an upcoming Exploration Target;
- Continuity of vein sets and grades are described in three dimensions across multiple datasets including:
  - Structural oriented drill core data, quality control data and geostatistics that demonstrate a low coefficient of variation;
  - Geological likeness;
  - Predictability of extension drilling;
  - Fifty years of historic mining records and drilled continuity below mined areas.
- A total of 42 mineralised vein set shapes have been created for Sunday Creek. The mineralised vein sets are typically between 5-30 m wide, 20-100 m in strike (see Figures 5-7 which show 3 individual veins strike distance 30-40 m, 25-40 m, 40-55 m and up to 110 m) and currently defined vertically down to 1 km depth and up to 570 m in depth extent on an individual vein set basis.

Southern Cross Gold's Managing Director, Michael Hudson, states, *"The Company will soon release a maiden Exploration Target for the Apollo and Rising Sun areas at Sunday Creek. This update describes vein morphology and geological and vein continuity to provide geological context for the Exploration Target.*

"The observations made here are important because, while geological continuity is critical when constructing a mineral deposit model, in most cases it is the continuity of the grade of the mineralisation that will determine the economic nature of a deposit."

As is standard in industry, Southern Cross Gold is applying multiple datasets to build the Sunday Creek geological and mineralisation model. These are described below.

Geostatistics

A total of 42 mineralised vein set shapes have been created for Sunday Creek. Wireframes were created in Leapfrog Geo using a threshold of 1 g/t Au over 2 m. Modelling consistently shows the vein sets have a higher-grade core with broader lower grade halos. The Company, along with leading global consultants, are preparing grade variography with volumes determined by a strong understanding of geological and grade continuity, trends and other supporting information. The mineralisation model provides the first geostatistical summary of the project.

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SOUTHERN CROSS GOLD

Coefficient of variation

The coefficient of variation ("CV") is the ratio of the standard deviation to the average of the assay results. The lower the CV, the less variable and erratic the distribution of the mineralisation is, and therefore it is easier to model (Table 1).

In Apollo, where sufficient drill density and drill spacing is present, geostatistical assessment provides validity of the geological shapes (Table 2). Within Apollo, the **average of all the vein sets has a CV below 1.5** when applied to 1 m composite data and an average CV of less than 2 for raw assays (Tabel2). Rising Sun requires further drilling before similar calculations can be made. The CV at Apollo implies both a strong understanding of the geological controls on mineralisation, correct sub-domaining of high tenor material and the predictability of high-grade mineralisation within these shapes.

Coefficient of Variation (CV) Range	<1	1-2	2-5	>5
Qualitative Description	Excellent	Good	High	Extreme

Table 1: Qualitative description of the range of the Coefficient of Variation ("CV") within mineral systems. The lower the CV, the less variable and erratic the distribution of the mineralisation is, and therefore it is easier to model.

Stereonets

All diamond drill core drilled by Southern Cross Gold is orientated. Orientation data can place structures measured in drill core in 3-dimensional space. A measure of confidence is assigned to ensure only quality data are utilised and drill bias, or inaccurate measurements, do not materially influence the interpretation. Combined with triangulation of intercepts (minimum three points on a plane to determine an orientation) high confidence in structural continuity of vein sets is maintained. This allows for major trends and critical controls on high grade trends or linking features to be identified.

Geological controls on mineralisation (structural, chemical, stratigraphic) exist in every ore deposit and Sunday Creek is no different. Mineralisation is structurally controlled, with increased mineralisation associated within the "bleaching" around and within the intrusive sequence. Early alteration and sulphide (pyrite) mineralisation exploited the vesicular/amygdaloidal nature of the pervasively altered/mineralised dyke and the brecciated areas, and forms east-west trending pyrite veinlets. Stereonet data supports this observation and shows pyritic veins parallel the east-west structural host and predates the higher tenor NNW Au-Sb mineralised vein sets (Figure 1).

Stereonet data (Figure 1) also demonstrates that gold-antimony ("Au-Sb") mineralisation is dominantly hosted within zones of sub-vertical, brittle-ductile NNW-NW striking shear veins and associated veins, containing visible gold, quartz, stibnite, occasional fibrous sulphosalts and minor ferroan carbonates infill. The veins have an associated selvedge of disseminated sulphides in the form of arsenian pyrite, pyrite and arsenopyrite. The mineralised vein sets are typically between 5-30 m wide, 20-100 m in strike (see Figures 5-7 which show 3 individual veins strike distance 30-40 m, 25-40 m, 40-55 m and up to 110 m) and currently defined vertically down to 1 km depth and up to 570 m in depth extent on an individual vein set basis. These zones repeat every 10-20 m within the Apollo and Rising Sun areas with 42 vein sets currently defined to date.

When observed from above, the altered sediment and dyke host resembles the side rails of a ladder, where the sub-vertical mineralised vein sets are the rungs that extend from surface to depth (Figures 5-7).

Quality Control Data

Drilling recovery at Sunday Creek is excellent (99.2% average core recovery). All samples are oriented diamond core, predominately HQ core size. Quality control data is routinely acquired. Standards are inserted at regular intervals and show appropriate consistency. Both field duplicates (quarter core) and laboratory duplicates (from the LM5 pulveriser) show good consistency implying homogenisation at both the core and pulp sampling stages with low variability (Figure 2). Additional screen fire assay data compares favourably with fire assay data showing the homogenisation of mineralisation, and low nugget effect after pulverisation (Figure 3).

Predictability

The Company is now able to plan drill holes and predict, with a high degree of confidence, the vertical and lateral extents of high-grade mineralisation within the altered "bleached" sediment and dyke host. This is best evidenced at the Rising Sun area where our drilling over the last 6 months has expanded the strike and footprint of these vein sets. Longitudinal section views of vein sets RS10, RS20 and RS80 with mineralised intercepts are shown (Figures 4-7) to demonstrate how the Company is building predictability of veins sets with continued drilling.

Geological Likeness

A strong component of the geological domaining of vein sets and high-grade individual veins relies on the geological similarities of the interval; similar mineralogy, vein types and textures are critical to identifying the domain, as well as consistent orientations ensuring that assays are not simply being linked together in a coincidental manner. Figures 8-9 show examples of textural similarity of veins and breccias containing high grade gold from recent drillholes.

Old mining areas

Hard rock mining at Sunday Creek commenced in the 1870's and continued until after World War 1. Fifty years of historic mining records and remanent stoping highlight similar observations of the E-W host and continuity of the NW veins set structures. Whitelaw (1899) describes the "ladder" structure of the host structure "rails" and vein set "rungs" as observed today:

> *"Sulphide in large and oxide in small quantities occur in connexion (sic) with numerous quartz reefs crossing a strong well defined diorite dyke, which cuts diagonally through the enclosing Silurian slates and sandstones of Sunday Creek, 8 miles east of Kilmore. The dyke has an average width of 80 feet it strikes E 10^0 N. It has been traced on the surface for over two miles uninterruptedly, is very fine grained, contains a large amount of arsenial (sic) and iron pyrites disseminated throughout, and towards the north is somewhat porphyritic in structure, passing over into aphanitic porphyry. It is generally a greenish colour."*
>
> *"Cutting through the dyke in a direction N10^0W, at intervals every few yards occur mineral reefs composed mostly of quartz, antimony, pyrites and breccias of the adjacent "country". Of these reefs, every one that has been exploited has proved auriferous."*

Additionally, historic mining stope orientations are consistent with surrounding orientated drill core and mineralised intercepts. Drilled mineralisation at Apollo coincides spatially with historic stopes and development (Figure 10). LiDAR surface mapping also shows the consistent mining of the mineralised "rungs" in a NW direction across the 10 km trend of historic surface workings at Sunday Creek (Figure 11).

Pre-Resource Studies

SRK Consulting (Australasia) Pty Ltd ("SRK") have been engaged to work with in-house staff for ongoing modelling assistance and the eventual preparation of a Mineral Resource Estimate, consistent with the requirements of the 2012 edition of the JORC Code.

In-House and External Expertise

Southern Cross Management and Board have deep internal technical experience and the Company is led by those with who have made multiple discoveries which have advanced to mining across the globe over the last 30 years.

The SXG Board is Chaired by Tom Eadie, a seasoned explorer with numerous discoveries and capital market successes. Likewise, David Henstridge is an industry veteran who has dedicated his career to mineral discovery and the capital markets. Georgina Carnegie has a long career in mining and finance and provides strong strategic and governmental advice.

Management is led by Michael Hudson, Managing Director, who has +30 years of mine and exploration experience with multiple gold, base metal and REE mineral discoveries. Lisa Gibbons, General Manager, has been involved with multiple gold discoveries with North Flinders Mines, Normandy and Newmont in Australia. Kenneth Bush, Exploration Manager is an experienced (>10 years) exploration and mine geologist specialising in 3D geological and structural modelling. He has worked extensively in Victoria on some of the highest-grade gold mines in the world including Costerfield and Fosterville. The Company also employs several experienced geological and geotechnical staff, augmented by highly experienced geological consultants.

About Sunday Creek

History

The Sunday Creek deposit is a high level orogenic (or epizonal) deposit. Small scale mining has been undertaken in the project area since the 1880s continuing through to the early 1900s. Historical production occurred with multiple small shafts and alluvial workings across the existing permits. Past production at the Sunday Creek prospect is reported as 41,000 oz gold at a grade of 33 g/t gold. Larger historic workings along the trend from west to east include Christina, Golden Dyke, Rising Sun and Apollo.

Regional Geology

Sunday Creek occurs with the Melbourne Zone of the Lachlan Geosyncline, in sequences folded and thrust-faulted by the Late Devonian Tabberabberan Orogeny. The regional host to the Sunday Creek mineralisation is an interbedded turbidite sequence of siltstones, mudstones, and minor sandstones, metamorphosed to sub-greenschist facies and folded into a set of open north-west trending synclines and anticlines.

Structural Setting and Local Geology

Intruded into the sedimentary sequence is a series of intermediate monzodiorite – diorite dykes and breccias on an east-west trend. The Sunday Creek dykes have highly variable textures and compositions with the earliest emplaced aphanitic varieties emplaced along thin fracture sets. These fine-grained dykes locally grade into porphyritic to massive varieties as the thickness of the dykes increases and brecciate in areas of complexity or in proximity to fold hinges.

Large scale thrusts sub-parallel to the NW trending structural grain, dislocate the dyke system and an array of sub-vertical extension veins form subparallel to the bedding trend and orthogonal to the intruded dyke sequence. Veining is focused within areas of high competency contrast, such as the intruded dyke and surrounding alteration, fold hinges and areas of structural complexity.

Alteration

Distally a regional chlorite alteration weakly pervades the sediments, with a change in mica composition from phengitic to muscovitic mica approaching mineralisation, an increase in carbonate spotting and cementation and proximal to the dyke a very intense texturally destructive alteration of sericite-carbonate-silica “bleaching” of the sediments.

Further Information

Further discussion and analysis of the Sunday Creek project is available through the interactive Vrify 3D animations, presentations and videos all available on the SXG website. These data, along with an interview on these results with Managing Director Michael Hudson, with a 3D Leapfrog presentation, can be viewed at [www.southerncrossgold.com.au.](http://www.southerncrossgold.com.au)

Gold Equivalent Calculation

SXG considers that both gold and antimony that are included in the gold equivalent calculation ("AuEq") have reasonable potential to be recovered at Sunday Creek, given current geochemical understanding, historic production statistics and geologically analogous mining operations. Historically, ore from Sunday Creek was treated onsite or shipped to the Costerfield mine, located 54 km to the northwest of the project, for processing during WW1. The Costerfield mine corridor, now owned by Mandalay Resources Ltd contains two million ounces of equivalent gold (Mandalay Q3 2021 Results), and in 2020 was the sixth highest-grade global underground mine and a top 5 global producer of antimony.

SXG considers that it is appropriate to adopt the same gold equivalent variables as Mandalay Resources Ltd in its Mandalay Technical Report, 2022 dated 25 March 2022. The gold equivalence formula used by Mandalay Resources was calculated using recoveries achieved at the Costerfield Property Brunswick Processing Plant during 2020, using a gold price of US$1,700 per ounce, an antimony price of US$8,500 per tonne and 2021 total year metal recoveries of 93% for gold and 95% for antimony, and is as follows:

$$AuEq = Au\ (g/t) + 1.58 \times Sb\ (\%).$$

Based on the latest Costerfield calculation and given the similar geological styles and historic toll treatment of Sunday Creek mineralisation at Costerfield, SXG considers that a $AuEq = Au\ (g/t) + 1.58 \times Sb\ (\%)$ is appropriate to use for the initial exploration targeting of gold-antimony mineralisation at Sunday Creek.

- Ends -

This announcement has been approved for release by the Board of Southern Cross Gold Ltd.

Competent Person Statement

Information in this announcement that relates to new exploration results contained in this report is based on information compiled by Mr Kenneth Bush and Mr Michael Hudson. Mr Bush is a Member of Australian Institute of Geoscientists and Mr Hudson is a Fellow of The Australasian Institute of Mining and Metallurgy.

Mr Bush and Mr Hudson each have sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bush is Exploration Manager and Mr Hudson is Managing Director of Southern Cross Gold Limited and both consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Certain information in this announcement that relates to prior exploration results is extracted from the Independent Geologist's Report dated 16 March 2022 which was issued with the consent of the Competent Person, Mr Terry C. Lees. The report is included the Company's prospectus dated 17 March 2022 which was released as an announcement to ASX on 12 May 2022 and is available at www2.asx.com.au under code "SXG". The Company confirms that it is not aware of any new information or data that materially affects the information related to exploration results included in the original market announcement. The Company confirms that the form and context of the Competent Persons' findings in relation to the report have not been materially modified from the original market announcement.

Certain information in this announcement also relates to prior drill hole exploration results, are extracted from the following announcements, which are available to view on www.southerncrossgold.com.au:

- 7 October, 2020 MDDSC003, 27 October, 2021 MDDSC020 & 21, 12 May, 2022 CRC021, VCRC022, 1 June, 2023 SDDSC066, 4 October, 2022 SDDSC041, 43 & 46, 21 November, 2022 SDDSC050, 14 December, 2022 SDDSC050, 28 February, 2023 SDDSC053 & 55, 16 May, 2023 SDDSC064, 3 July, 2023 SDDSC069, 28 August, 2023 SDDSC078, 5 September, 2023 SDDSC077B, 12 October, 2023 SDDLV003 & 4, 23 October, 2023 SDDSC080 & 82, 9 Novembner, 2023 SDDSC091, 14 December, 2023 SDDSC092, 11 January, 2024 SDDSC097A

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original document/announcement and the Company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement.

For further information, please contact:

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Table 2: Statistics of Au g/t within modelled domain shapes in Apollo. Values are raw assays.

Name	Count	Length	Mean	Standard deviation	Coefficient of Variation	Variance	Minimum	Lower quartile	Median	Upper quartile	Maximum
HG_A30_1	6	3.5	11.3	24.3	2.2	590.2	0.0	0.3	3.3	7.2	80.0
HG_A60_1	8	5.2	22.1	19.5	0.9	380.8	0.1	8.4	17.9	25.1	52.0
HG_A70_1	6	3.6	10.6	11.7	1.1	137.8	0.0	0.0	13.6	23.5	27.3
HG_A70_2	9	4.9	7.1	8.2	1.2	67.8	0.0	2.9	5.7	8.4	32.6
HG_A140_1	2	1.9	158.2	142.9	0.9	20422.2	53.9	53.9	256.0	256.0	256.0
A10_VeinSet	91	82.9	3.9	6.1	1.5	36.8	0.0	1.4	2.0	4.0	72.9
A15_VeinSet_L	6	6.0	7.0	5.9	0.8	34.7	0.0	1.7	7.5	13.8	13.9
A20_VeinSet	34	29.8	4.6	6.9	1.5	48.3	0.0	1.1	1.3	5.1	36.4
A30_VeinSet	70	55.6	2.5	5.4	2.2	29.2	0.0	0.4	1.2	2.0	48.8
A40_VeinSet	41	36.8	2.7	3.0	1.1	9.0	0.0	0.9	1.7	3.7	14.5
A50_VeinSet	243	200.4	2.9	15.9	5.5	252.4	0.0	0.0	0.3	2.0	374.0
A60_VeinSet	51	35.1	4.0	6.2	1.5	38.2	0.1	0.5	1.9	4.8	33.5
A65_VeinSet_L	87	76.9	2.2	7.4	3.3	54.9	0.0	0.0	0.1	0.5	47.0
A67_VeinSet_L	53	31.3	5.1	12.7	2.5	162.4	0.0	1.0	2.2	3.8	105.0
A70_VeinSet	137	91.8	2.1	5.1	2.4	26.1	0.0	0.2	0.9	2.0	63.5
A77_VeinSet	19	10.8	8.7	14.1	1.6	198.4	0.4	1.6	2.4	6.9	54.4
A90_VeinSet	35	24.4	2.1	3.1	1.5	9.5	0.0	0.0	1.0	2.5	14.4
A75_VeinSet	14	11.7	4.1	5.7	1.4	32.8	0.1	1.1	1.8	2.4	20.4
A80_VeinSet	64	43.1	1.8	4.9	2.8	23.9	0.0	0.0	0.4	1.6	41.7
A130_VeinSet	16	7.8	6.8	8.2	1.2	66.7	0.1	0.4	2.9	14.5	24.4
A140_VeinSet	35	20.3	2.6	5.7	2.2	32.1	0.0	0.2	1.2	2.4	40.9
A141_VeinSet	15	11.4	2.2	3.3	1.5	10.8	0.3	0.7	1.7	2.2	16.3
A142_VeinSet	21	13.6	3.0	5.1	1.7	26.3	0.0	1.1	1.5	3.1	26.2
A150_VeinSet	21	15.0	11.5	22.9	2.0	526.4	0.0	1.7	2.1	8.2	110.0

Figure 1: Stereonets showing poles to veins measured in oriented drill core. Stereonet data shows pyritic veins parallels the east-west structural host and predates the higher tenor NNW Au-Sb mineralised vein sets and gold-antimony ("Au-Sb") mineralisation is dominantly hosted within zones of sub-vertical, brittle-ductile NW striking shear veins and associated veins.

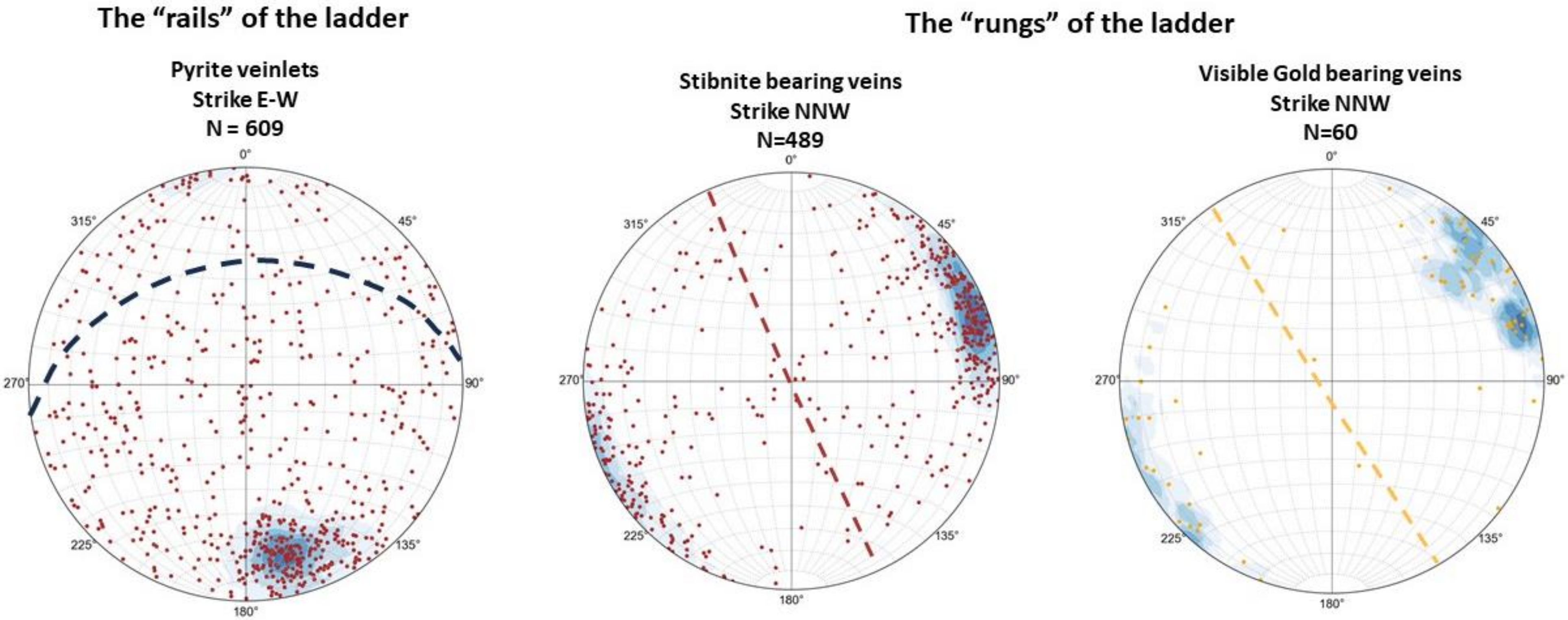


Figure 2: Quality control data showing field duplicates (325 quarter core samples) and laboratory duplicates (2,614 samples from the LM5 pulveriser) show good consistency implying homogenisation at both the core and pulp sampling stages with low variability.

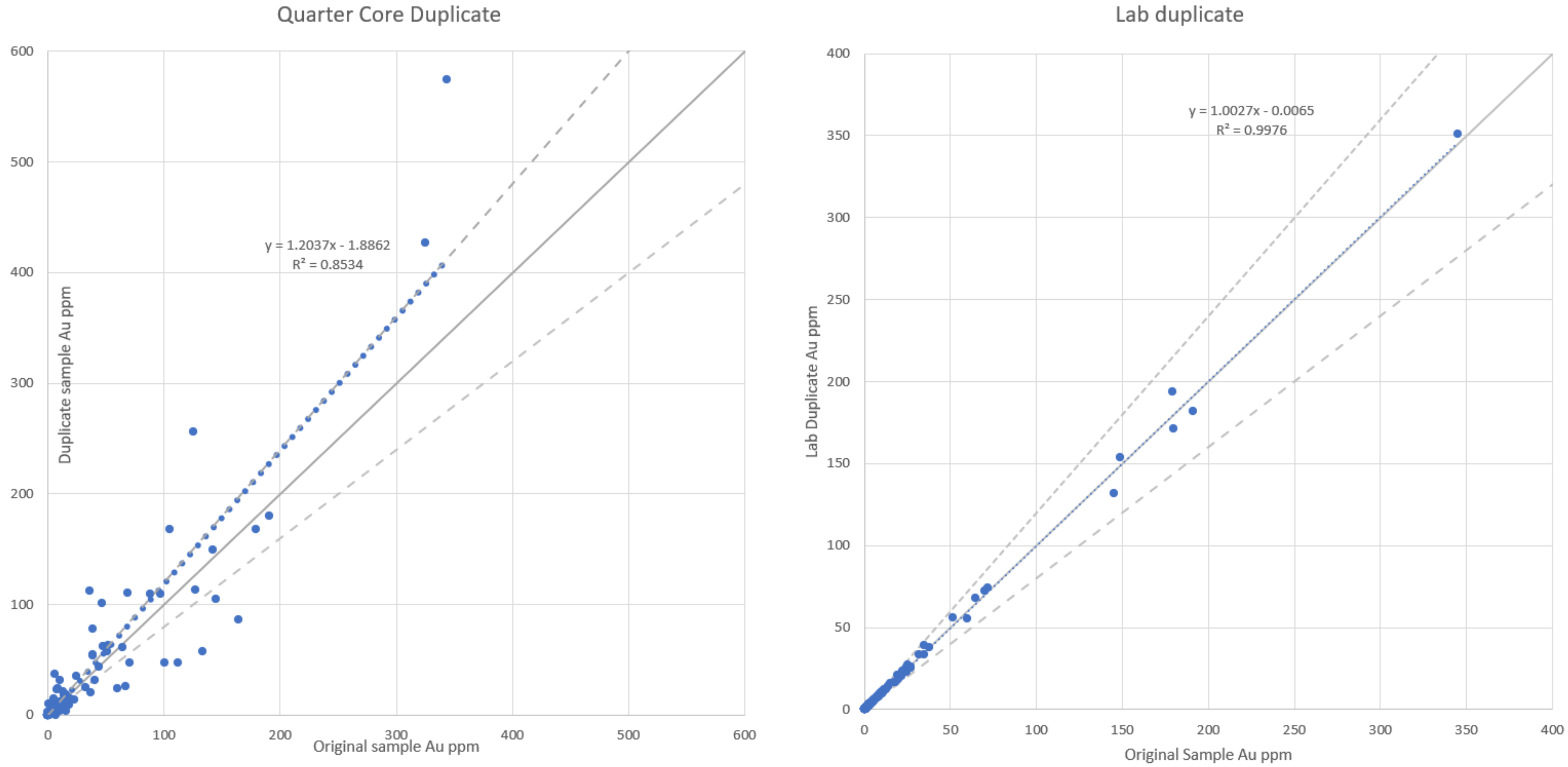


Figure 3: Quality control data showing screen fire assay data (110 samples) compares favourably with fire assay data showing the homogenisation of mineralisation, and low nugget effect after pulverisation.

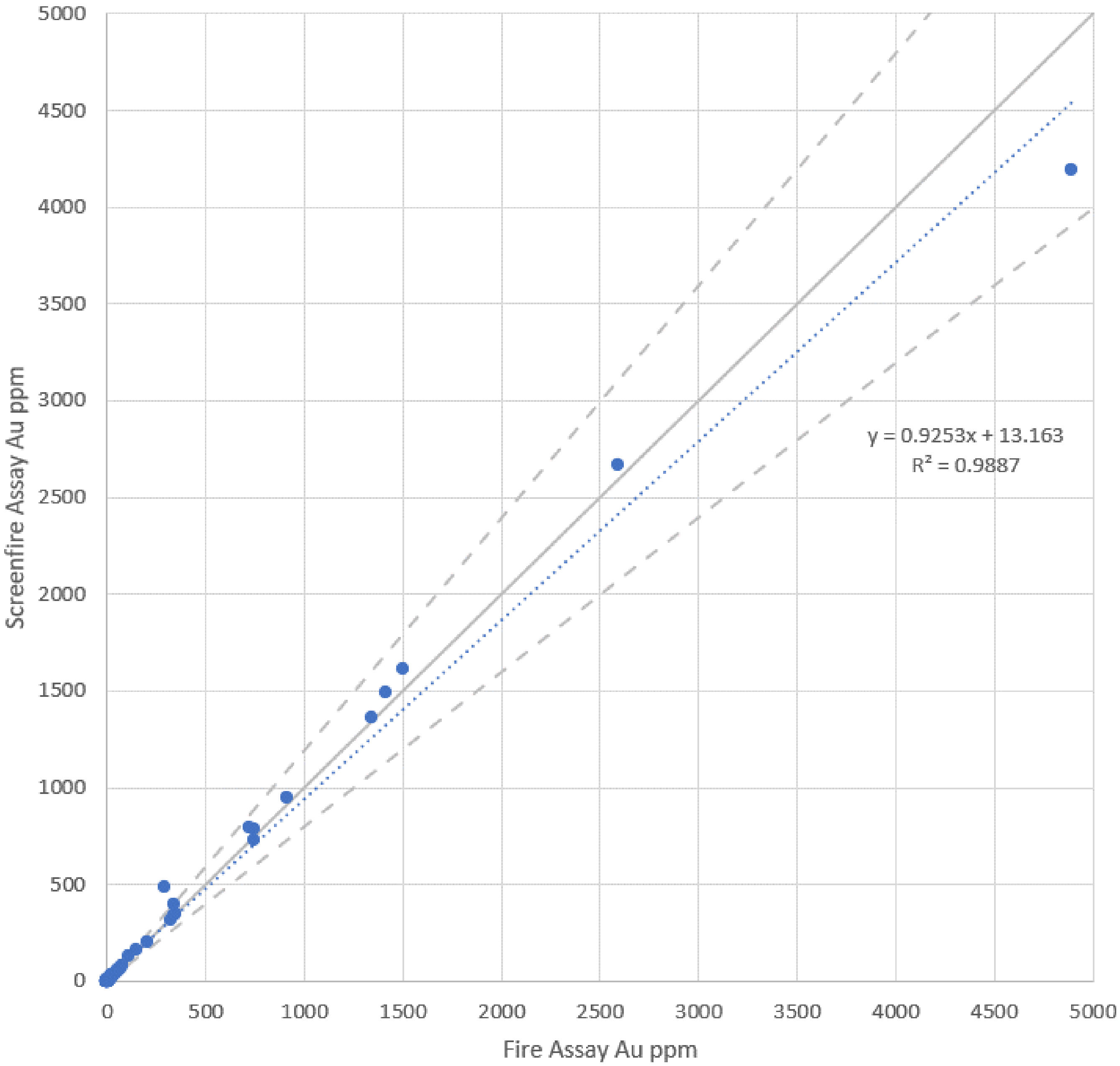


Figure 4: Longitudinal Section showing location of RS10, RS20 and RS80 vein sets.

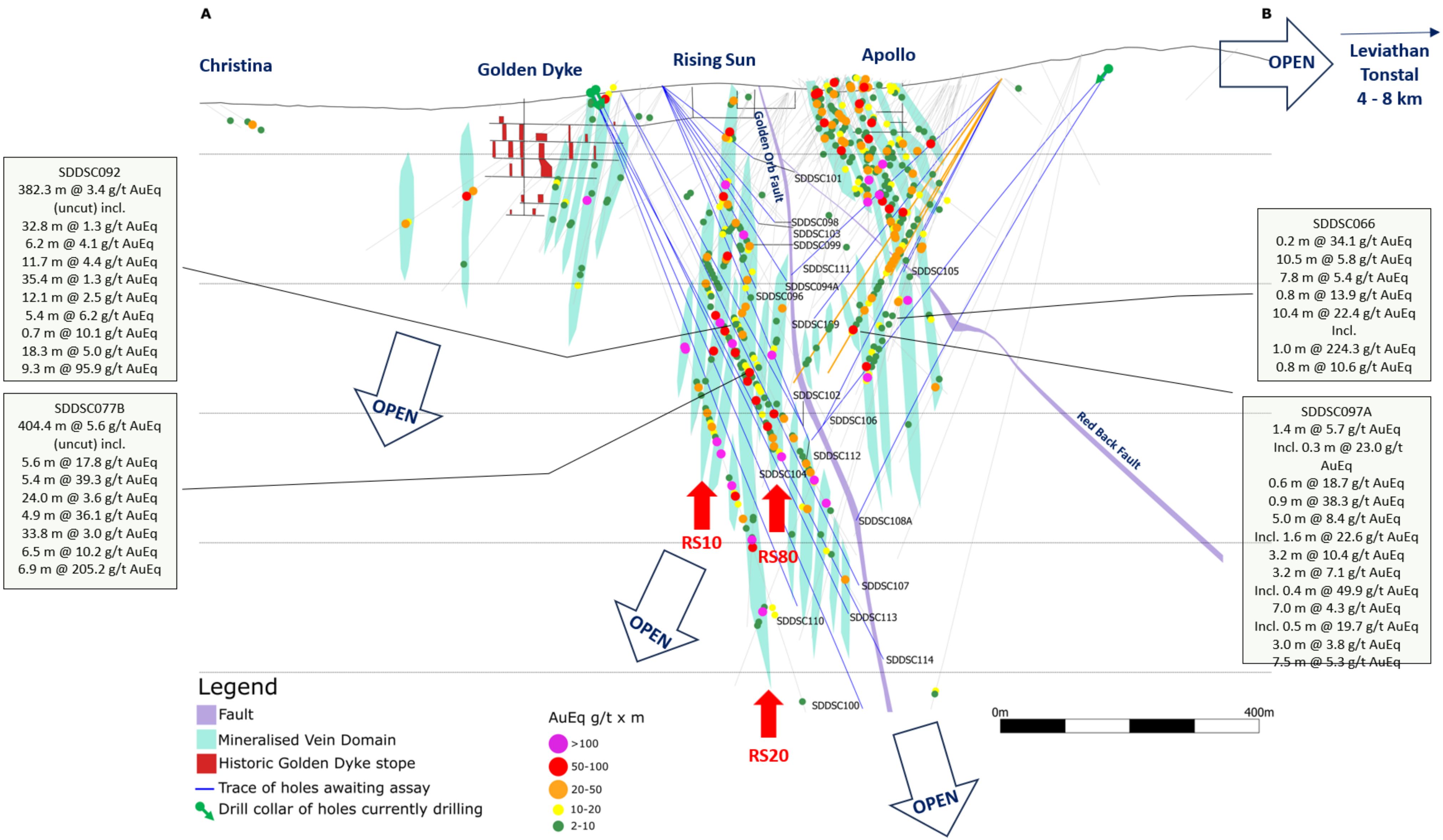


Figure 5: RS10 vein set defined at a 25 m x 50 m spacing extending over 570 m down dip and 30 m – 40 m along strike, with a 2 m @ 1 g/t Au lower cut-off grade. Drill density only limits extensions in all directions.

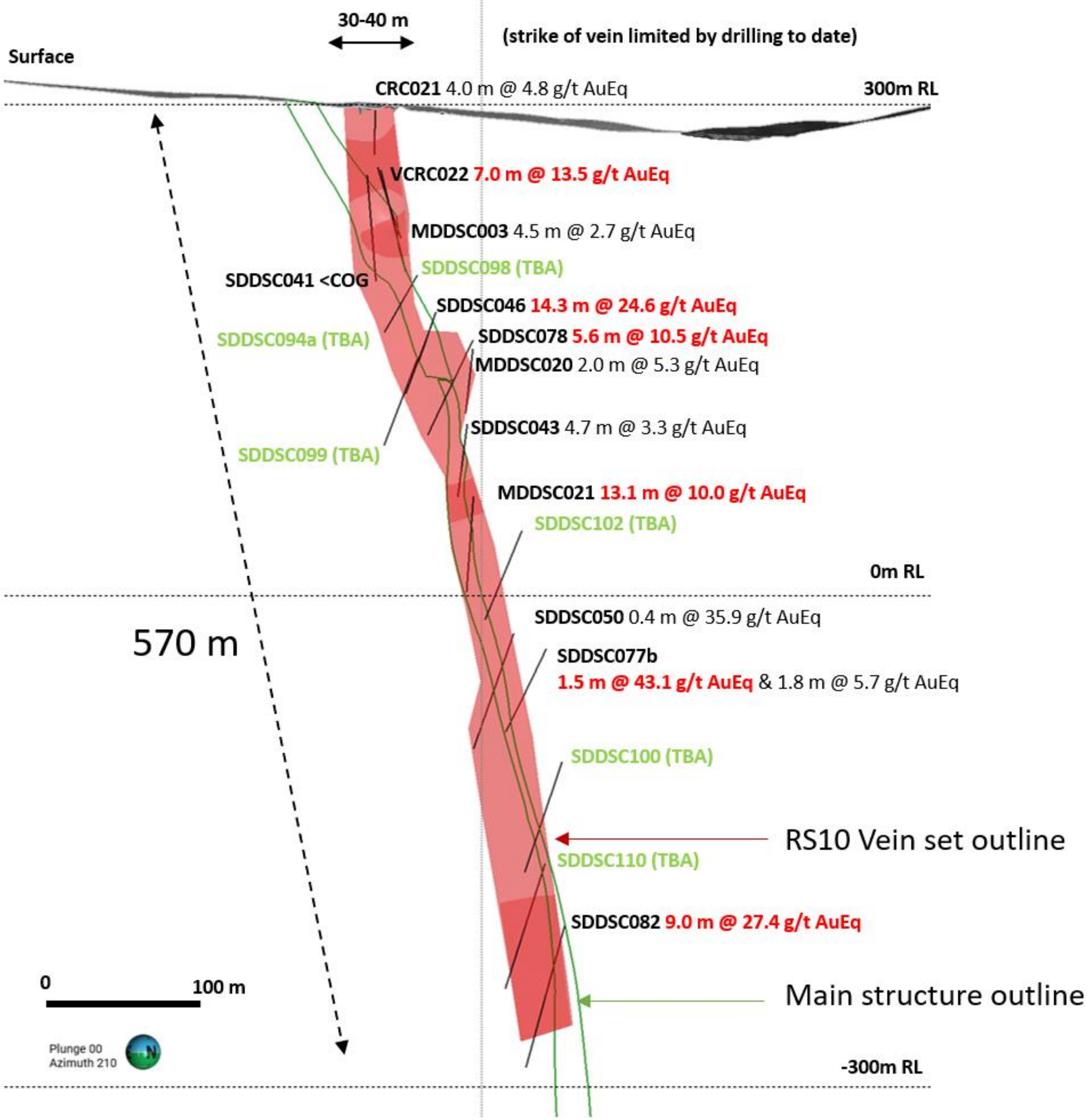


Figure 6: RS20 vein set defined at a 25 m x 50 m spacing extending over 275 m down dip and 25 m – 40 m along strike, with a 2m @ 1 g/t Au lower cut-off grade. Drill density only limits extensions in all directions.

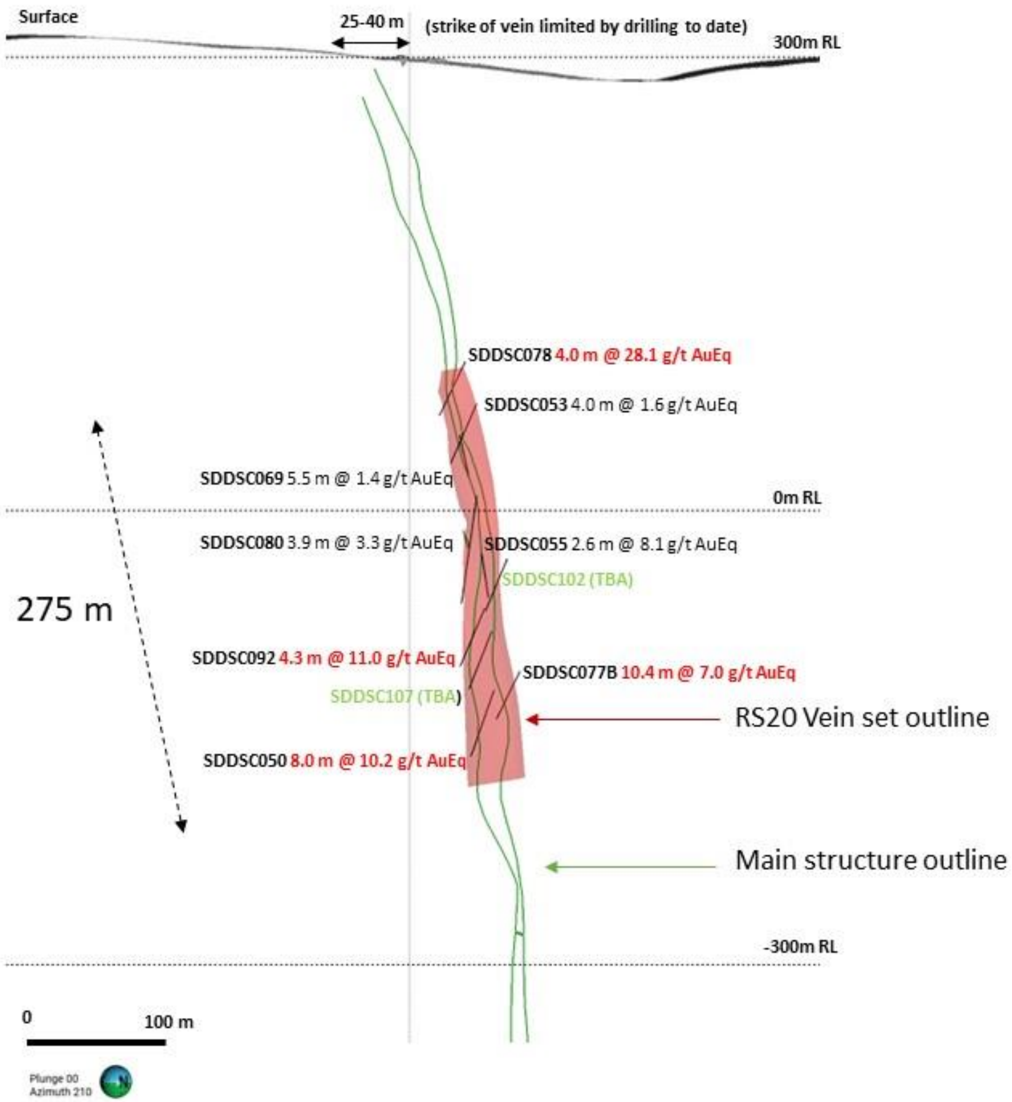


Figure 7: RS80 vein defined at a 25 m x 50 m spacing, set extending over 180 m down dip and 40 m – 55 m along strike (up to 110 m), with a 2m @ 1 g/t Au lower cut-off grade. Drill density only limits extensions in all directions.

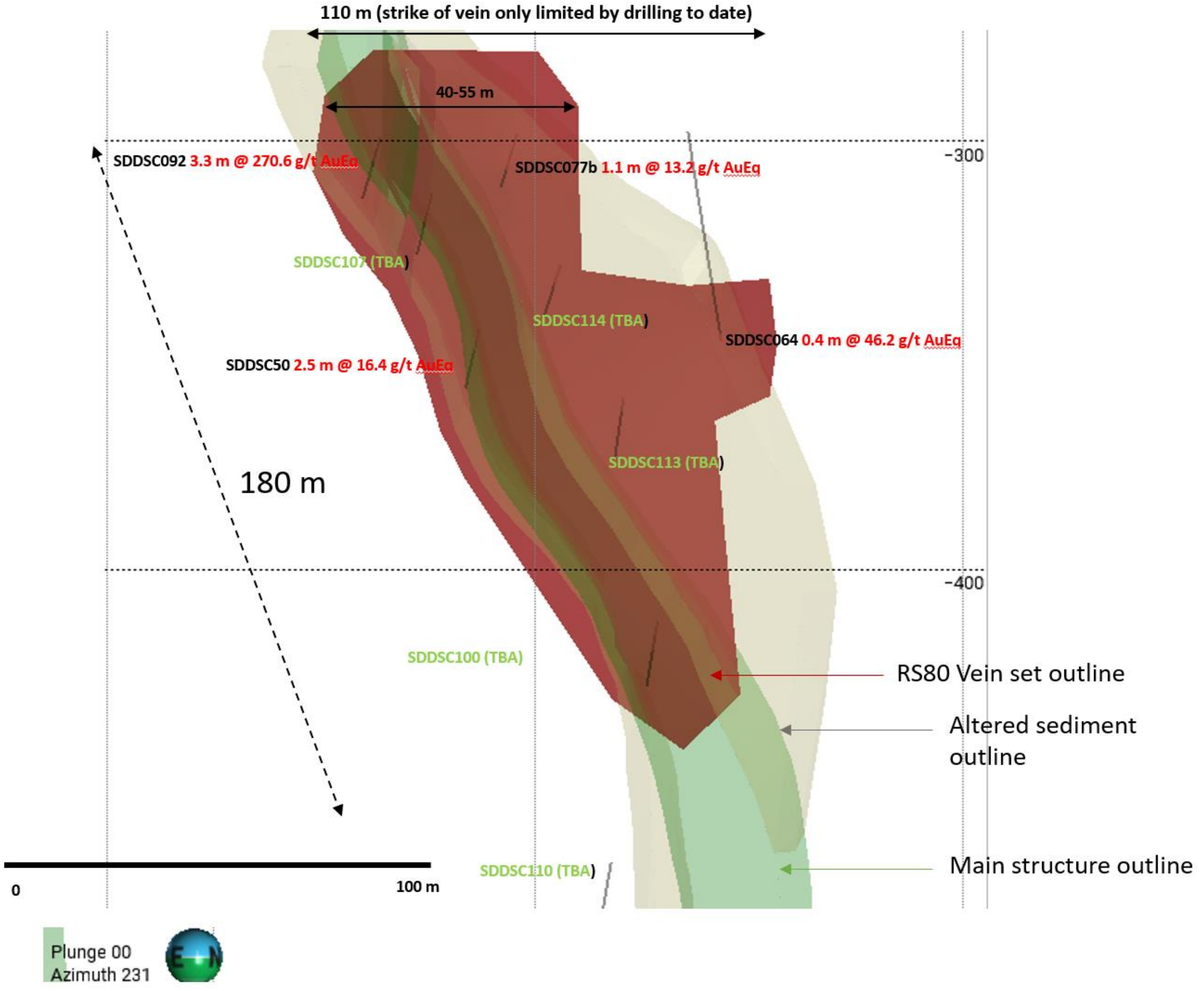
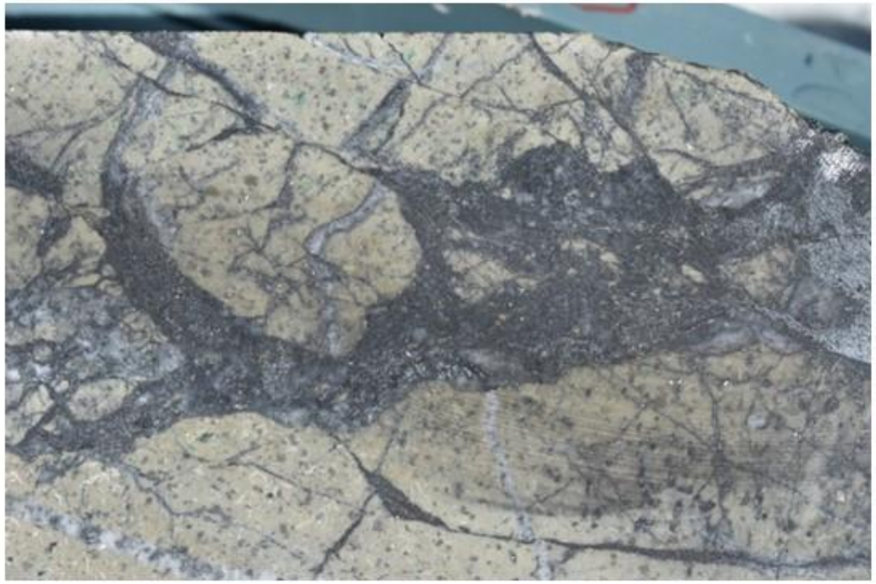
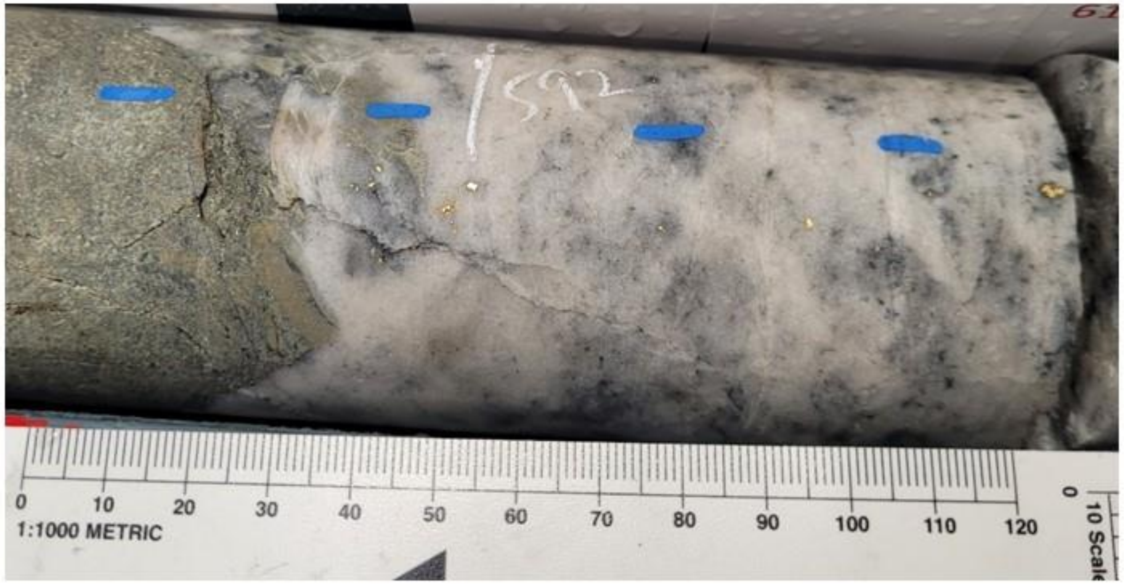


Figure 8: A strong component of the geological domaining of vein sets and high-grade individual veins relies on the geological similarities of the interval; similar mineralogy, vein types and textures are critical to identifying the domain, as well as consistent orientations ensuring that assays are not simply being linked together in a coincident manner. Here examples from drillhole SDDSC082.

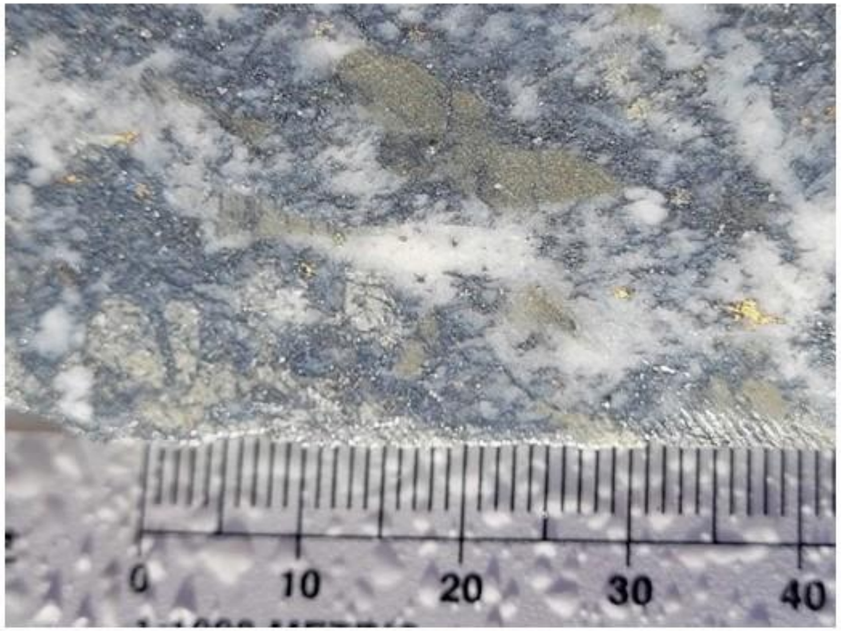


SDDSC082 from 744 m (within assayed interval 0.7 m @ 88.9 g/t AuEq (78.2 g/t Au, 6.8% Sb) from 744.0 m to 744.6 m showing cut core with brecciated dioritic dyke, with stibnite and quartz-carbonate veining with fine, disseminated frequent visible gold in stibnite. Note lime green fuchsite in altered dyke. Top to bottom 40 mm scale



SDDSC082 from 592 m (within assayed interval 0.9 m @ 351.3 g/t AuEq (351.2 g/t Au, 0.0% Sb) from 591.4 m to 592.3 m showing uncut core with quartz-carbonate massive vein with visible gold. Millimetre scale

Figure 9: A strong component of the geological domaining of vein sets and high-grade individual veins relies on the geological similarities of the interval; similar mineralogy, vein types and textures are critical to identifying the domain, as well as consistent orientations ensuring that assays are not simply being linked together in a coincident manner. Here examples from drillholes SDDSC077B and SDDSC091.



SDDSC091 from 439 m (within assayed interval 0.5 m @ 1,497.4 g/t AuEq (1490.0 g/t Au, 4.7% Sb) from 438.8 m to 439.3 m showing cut core with brecciated dioritic dyke, with stibnite and quartz-carbonate veining with fine, disseminated frequent visible gold. Millimetre scale.

SDDSC077B from 739.9 m (0.8 m @ 1,741.5 g/t AuEq (1,736.4 g/t Au, 3.3% Sb) showing quartz-carbonate stockwork with visible gold, stibnite and sulphosalts in an altered dyke. Top to bottom 20 mm scale

Figure 10: Historic mining stope orientations are consistent with surrounding orientated drill core and mineralised intercepts. Modelling from modern day diamond drilling within Apollo coincides spatially with historic stopes and development.

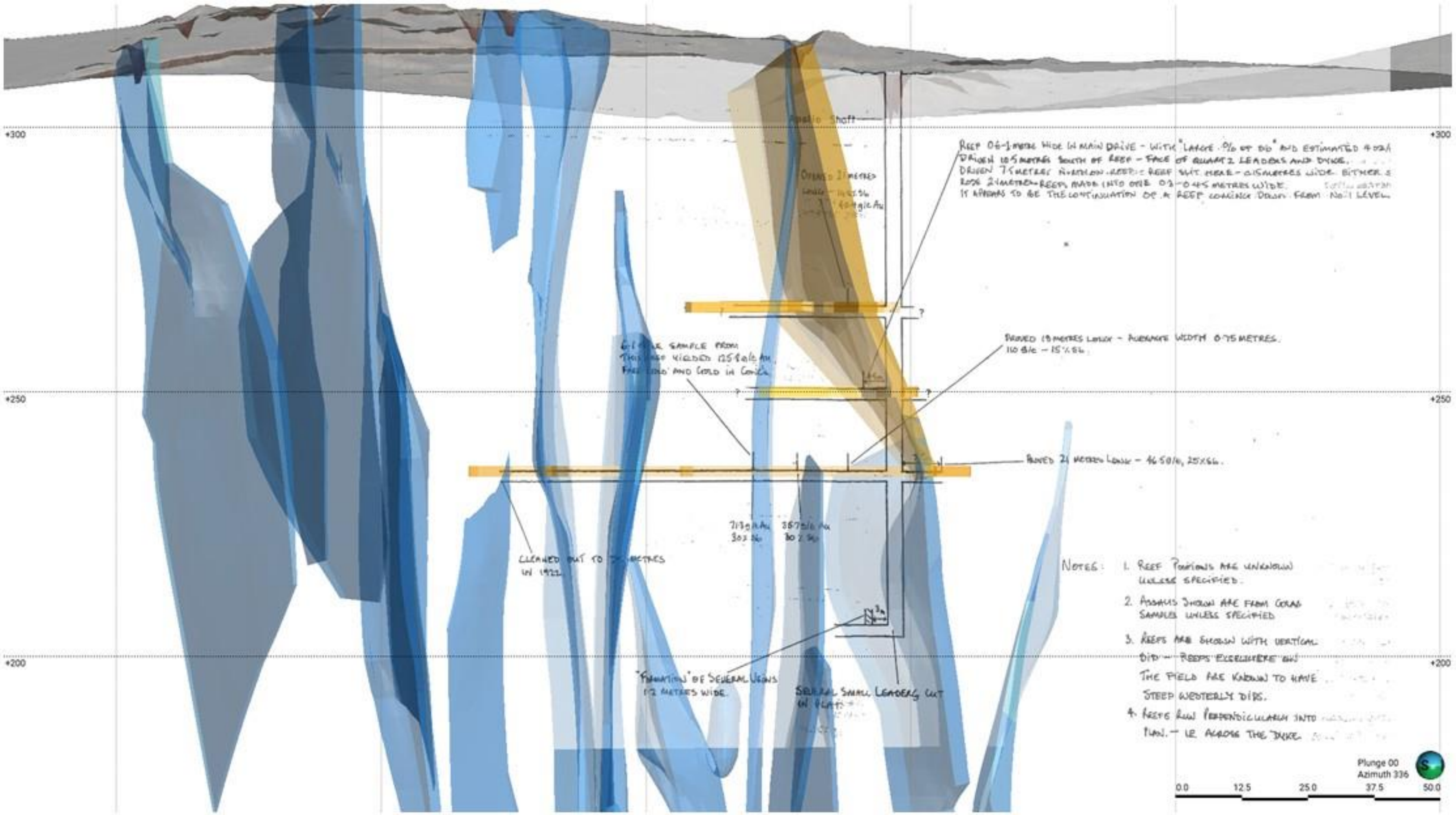


Figure 11: Sunday Creek regional plan view showing LiDAR, soil sampling, structural framework, regional historic epizonal gold mining areas and broad regional areas (Tonstal, Consols and Leviathan) tested by 12 holes for 2,383 m drill program. The regional drill areas are at Tonstal, Consols and Leviathan located 4,000-7,500 m along strike from the main drill area at Golden Dyke- Apollo.

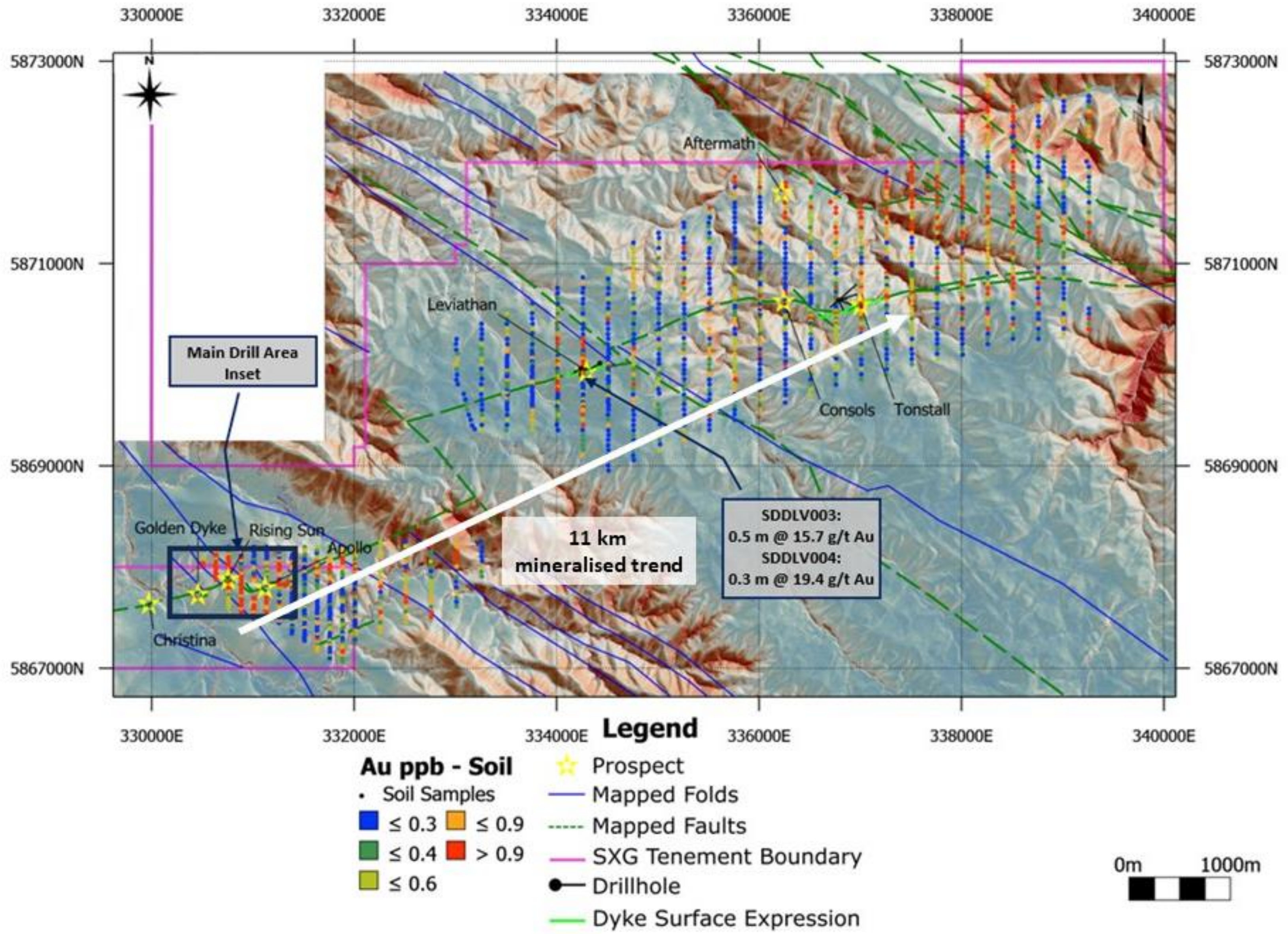
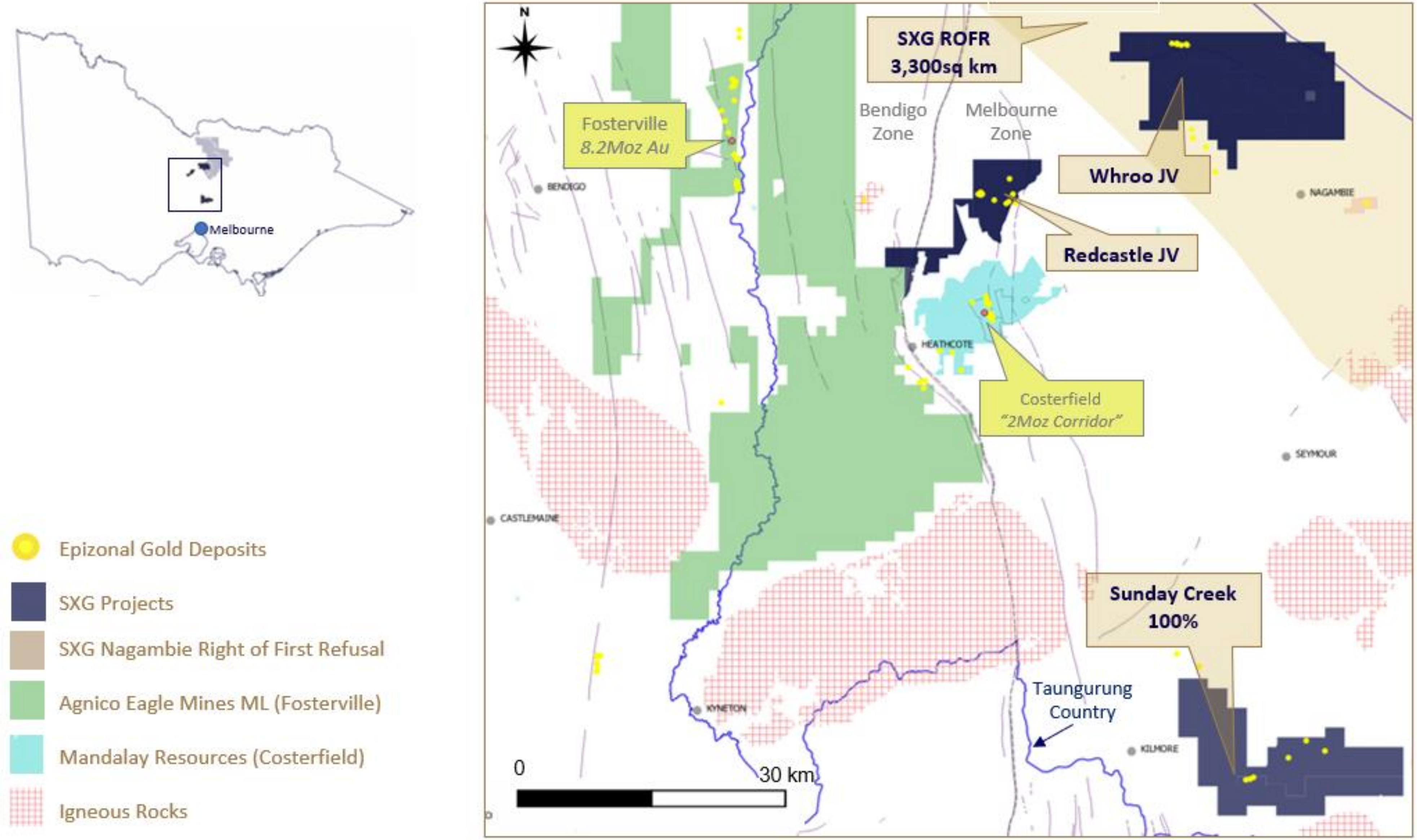


Figure 12: Location of the Sunday Creek project, along with SXG's other Victoria projects and simplified geology.



JORC Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Sampling has been conducted on drill core (half core for >90% and quarter core for check samples), grab samples (field samples of in-situ bedrock and boulders; including duplicate samples), trench samples (rock chips, including duplicates) and soil samples (including duplicate samples). Locations of field samples were obtained by using a GPS, generally to an accuracy of within 5 metres. Drill hole and trench locations have been confirmed to <1 metre using a differential GPS. Samples locations have also been verified by plotting locations on the high-resolution Lidar maps • Drill core is marked for cutting and cut using an automated diamond saw used by Company staff in Kilmore. Samples are bagged at the core saw and transported to the Bendigo OnSite Laboratory for assay. At OnSite samples are crushed using a jaw crusher combined with a rotary splitter and a 1 kg split is separated for pulverizing (LM5) and assay. • Standard fire assay techniques are used for gold assay on a 30 g charge by experienced staff (used to dealing with high sulphide and stibnite-rich charges). OnSite gold method by fire assay code PE01S. • Screen fire assay is used to understand gold grain-size distribution where coarse gold is evident. • ICP-OES is used to analyse the aqua regia digested pulp for an additional 12 elements (method BM011) and over-range antimony is measured using flame AAS (method known as B050). • Soil samples were sieved in the field and an 80 mesh sample bagged and transported to ALS Global laboratories in Brisbane for super-low level gold analysis on a 50 g samples by method ST44 (using aqua regia and ICP-MS). • Grab and rock chip samples are generally submitted to OnSite Laboratories for standard fire assay and 12 element ICP-OES as described above.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• HQ diameter diamond drill core, oriented using Boart Longyear TruCore orientation tool with the orientation line marked on the base of the drill core by the driller/offsider. A standard 3 metre core barrel has been found to be most effective in both the hard and soft rocks in the project.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Core recoveries were maximised using HQ diamond drill core with careful control over water pressure to maintain soft-rock integrity and prevent loss of

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	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	fines from soft drill core. Recoveries are determined on a metre-by-metre basis in the core shed using a tape measure against marked up drill core checking against driller's core blocks. • Plots of grade versus recovery and RQD (described below) show no trends relating to loss of drill core, or fines.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geotechnical logging of the drill core takes place on racks in the company core shed. Core orientations marked at the drill rig are checked for consistency, and base of core orientation lines are marked on core where two or more orientations match within 10 degrees. Core recoveries are measured for each metre RQD measurements (cumulative quantity of core sticks > 10 cm in a metre) are made on a metre by metre basis. • Each tray of drill core is photographed (wet and dry) after it is fully marked up for sampling and cutting. • The ½ core cutting line is placed approximately 10 degrees above the orientation line so the orientation line is retained in the core tray for future work. • Geological logging of drill core includes the following parameters: Rock types, lithology Alteration Structural information (orientations of veins, bedding, fractures using standard alpha-beta measurements from orientation line; or, in the case of un-oriented parts of the core, the alpha angles are measured) Veining (quartz, carbonate, stibnite) Key minerals (visible under hand lens, e.g. gold, stibnite) • 100% of drill core is logged for all components described above into the company MX logging database. • Logging is fully quantitative, although the description of lithology and alteration relies on visible observations by trained geologists. • Each tray of drill core is photographed (wet and dry) after it is fully marked up for sampling and cutting. • Logging is considered to be at an appropriate quantitative standard to use in future studies.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Drill core is typically sampled using half of the HD diameter. The drill core orientation line is retained. • Quarter core is used when taking sampling duplicates (termed FDUP in the database). • Sampling representivity is maximised by always taking the same side of the drill core (whenever oriented), and consistently drawing a cut line on the core where orientation is not possible. The field technician draws these lines.

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	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample sizes are maximised for coarse gold by using half core, and using quarter core and half core splits (laboratory duplicates) allows an estimation of nugget effect. • In mineralised rock the company uses approximately 10% of ¼ core duplicates, certified reference materials (suitable OREAS materials), laboratory sample duplicates and instrument repeats. • In the soil sampling program duplicates were obtained every 20th sample and the laboratory inserted low-level gold standards regularly into the sample flow.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The fire assay technique for gold used by OnSite is a globally recognised method, and over-range follow-ups including gravimetric finish and screen fire assay are standard. Of significance at the OnSite laboratory is the presence of fire assay personnel who are experienced in dealing with high sulphide charges (especially those with high stibnite contents) – this substantially reduces the risk of in accurate reporting in complex sulphide-gold charges. • The ICP-OES technique is a standard analytical technique for assessing elemental concentrations. The digest used (aqua regia) is excellent for the dissolution of sulphides (in this case generally stibnite, pyrite and trace arsenopyrite), but other silicate-hosted elements, in particular vanadium (V), may only be partially dissolved. These silicate-hosted elements are not important in the determination of the quantity of gold, antimony, arsenic or sulphur. • A portable XRF has been used in a qualitative manner on drill core to ensure appropriate core samples have been taken (no pXRF data are reported or included in the MX database). • Acceptable levels of accuracy and precision have been established using the following methods *¼ duplicates* – half core is split into quarters and given separate sample numbers (commonly in mineralised core) – low to medium gold grades indicate strong correlation, dropping as the gold grade increases over 40 g/t Au. *Blanks* – blanks are inserted after visible gold and in strongly mineralised rocks to confirm that the crushing and pulping are not affected by gold smearing onto the crusher and LM5 swing mill surfaces. Results are excellent, generally below detection limit and a single sample at 0.03 g/t Au. *Certified Reference Materials* – OREAS CRMs have been used throughout the project including blanks, low (<1 g/t Au), medium (up to 5 g/t Au) and high-grade gold samples (> 5 g/t Au). Results are automatically checked on data import into the MX database to fall within 2 standard deviations of the expected value. *Laboratory splits* – OnSite conducts splits of both coarse crush and pulp

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		duplicates as quality control and reports all data. In particular, high Au samples have the most repeats. *Laboratory CRMs* – OnSite regularly inserts their own CRM materials into the process flow and reports all data *Laboratory precision* – duplicate measurements of solutions (both Au from fire assay and other elements from the aqua regia digests) are made regularly by the laboratory and reported. • *Accuracy and precision* have been determined carefully by using the sampling and measurement techniques described above during the sampling (accuracy) and laboratory (accuracy and precision) stages of the analysis. • *Soil sample* company duplicates and laboratory certified reference materials all fall within expected ranges.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The Independent Geologist has visited Sunday Creek drill sites and inspected drill core held at the Kilmore core shed. • Visual inspection of drill intersections matches the both the geological descriptions in the database and the expected assay data (for example, gold and stibnite visible in drill core is matched by high Au and Sb results in assays). • In addition, on receipt of results Company geologists assess the gold, antimony and arsenic results to verify that the intersections returned expected data. • The electronic data storage in the MX database is of a high standard. Primary logging data are entered directly by the geologists and field technicians and the assay data are electronically matched against sample number on return from the laboratory. • Certified reference materials, ¼ core field duplicates (FDUP), laboratory splits and duplicates and instrument repeats are all recorded in the database. • Exports of data include all primary data, from hole SDDSC077B onwards after discussion with SRK Consulting. Prior to this gold was averaged across primary, field and lab duplicates. • Adjustments to assay data are recorded by MX, and none are present (or required). • Twinned drill holes are not available at this stage of the project.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Differential GPS used to locate drill collars, trenches and some workings • Standard GPS for some field locations (grab and soils samples), verified against Lidar data. • The grid system used throughout is Geocentric datum of Australia 1994; Map Grid Zone 55 (GDA94_Z55), also referred to as ELSG 28355. • Topographic control is excellent owing to sub 10 cm accuracy from Lidar data.

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Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The data spacing is suitable for reporting of exploration results – evidence for this is based on the improving predictability of high-grade gold-antimony intersections. • At this time the data spacing and distribution are not sufficient for the reporting of Mineral Resource Estimates. This however may change as knowledge of grade controls increase with future drill programs. • Sample compositing has not been applied to the reporting of any drill results.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The true thickness of the mineralised intervals reported are interpreted to be approximately 60-70% of the sampled thickness. • Drilling is oriented in an optimum direction when considering the combination of host rock orientation and apparent vein control on gold and antimony grade. The steep nature of some of the veins may give increases in apparent thickness of some intersections, but more drilling is required to quantify. • A sampling bias is not evident from the data collected to date (drill holes cut across mineralised structures at a moderate angle).
Sample security	• *The measures taken to ensure sample security.*	• Drill core is delivered to the Kilmore core logging shed by either the drill contractor or company field staff. Samples are marked up and cut by company staff at the Kilmore core shed, in an automated diamond saw and bagged before loaded onto strapped secured pallets and trucked by commercial transport to Bendigo for submission to the laboratory. There is no evidence in any stage of the process, or in the data for any sample security issues.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Continuous monitoring of CRM results, blanks and duplicates is undertaken by geologists and the company data geologist. Mr Michael Hudson for SXG has the orientation, logging and assay data.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Sunday Creek Goldfield, containing the Clonbinane Project, is covered by the Retention Licence RL 6040 and is surrounded by Exploration Licence EL6163 and Exploration Licence EL7232. All the licences are 100% held by Clonbinane Goldfield Pty Ltd, a wholly owned subsidiary company of Southern Cross Gold Ltd.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The main historical prospect within the Sunday Creek project is the Clonbinane prospect, a high level orogenic (or epizonal) Fosterville-style deposit. Small scale mining has been undertaken in the project area since the 1880s continuing through to the early 1900s. Historical production occurred with multiple small shafts and alluvial workings across the Clonbinane Goldfield permits. Production of note occurred at the Clonbinane area with total production being reported as 41,000 oz gold at a grade of 33 g/t gold (Leggo and Holdsworth, 2013) • Work in and nearby to the Sunday Creek Project area by previous explorers typically focused on finding bulk, shallow deposits. Beadell Resources were the first to drill deeper targets and Southern Cross have continued their work in the Sunday Creek Project area. • EL54 - Eastern Prospectors Pty Ltd Rock chip sampling around Christina, Apollo and Golden Dyke mines. Rock chip sampling down the Christina mine shaft. Resistivity survey over the Golden Dyke. Five diamond drill holes around Christina, two of which have assays. • ELs 872 & 975 - CRA Exploration Pty Ltd Exploration focused on finding low grade, high tonnage deposits. The tenements were relinquished after the area was found to be prospective but not economic. Stream sediment samples around the Golden Dyke and Reedy Creek areas. Results were better around the Golden Dyke. 45 dump samples around Golden Dyke old workings showed good correlation between gold, arsenic and antimony. Soil samples over the Golden Dyke to define boundaries of dyke and mineralisation. Two costeans parallel to the Golden Dyke targeting soil anomalies. Costeans since rehabilitated by SXG. • ELs 827 & 1520 - BHP Minerals Ltd Exploration targeting open cut gold mineralisation peripheral to SXG tenements. • ELs 1534, 1603 & 3129 - Ausminde Holdings Pty Ltd

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		Targeting shallow, low grade gold. Trenching around the Golden Dyke prospect and results interpreted along with CRAs costeans. 29 RC/Aircore holes totalling 959 m sunk into the Apollo, Rising Sun and Golden Dyke target areas. ELs 4460 & 4987 - Beadell Resources Ltd • ELs 4460 & 4987 - Beadell Resources Ltd ELs 4460 and 4497 were granted to Beadell Resources in November 2007. Beadell successfully drilled 30 RC holes, including second diamond tail holes in the Golden Dyke/Apollo target areas. • Both tenements were 100% acquired by Auminco Goldfields Pty Ltd in late 2012 and combined into one tenement EL4987. • Nagambie Resources Ltd purchased Auminco Goldfields in July 2014. EL4987 expired late 2015, during which time Nagambie Resources applied for a retention licence (RL6040) covering three square kilometres over the Sunday Creek Goldfield. RL6040 was granted July 2017. • Clonbinane Gold Field Pty Ltd was purchased by Mawson Gold Ltd in February 2020. Mawson drilled 30 holes for 6,928 m and made the first discoveries to depth.
Geology	• *Deposit type, geological setting and style of* • *mineralisation.*	• Refer to the description in the main body of the release.

Drillhole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following*
	• *information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Refer to appendices

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for*	• See “Further Information” and “Metal Equivalent Calculation” in main text of press release.

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	such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg. 'down hole* • *length, true width not known').*	• See reporting of true widths in the body of the press release.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• The results of the diamond drilling are displayed in the figures in the announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All results above 0.1g/t Au have been tabulated in this announcement. The results are considered representative with no intended bias. • Core loss, where material, is disclosed in tabulated drill intersections.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Previously reported diamond drill drill results are displayed in plans, cross sections and long sections and discussed in the text and in the Competent Person's statement. • Preliminary testing (AMML Report 1801-1) has demonstrated the viability of recovering gold and antimony values to high value products by industry standard processing methods. • The program was completed by AMML, an established mineral and metallurgical testing laboratory specialising in flotation, hydrometallurgy, gravity and comminution testwork at their testing facilities in Gosford, NSW. The program was supervised by Craig Brown of Resources Engineering & Management, who was engaged to develop plans for initial sighter flotation testing of samples from drilling of the Sunday Creek deposit. • Two quarter core intercepts were selected for metallurgical test work (Table 1). A split of each was subjected to assay analysis The table below shows samples selected for metallurgical test work:

Sample Location	Sample Name	Weight (kg)	Drill hole	from (m)	to (m)
Rising Sun	RS01	22.8	MDDSC025	275.9	289.3
Apollo	AP01	16.6	SDDSC031	220.4	229.9

Criteria	JORC Code explanation	Commentary

		The metallurgical characterisation test work included:
		• Diagnostic LeachWELL testing.
		• Gravity recovery by Knelson concentrator and hand panning.
		• Timed flotation of combined gravity tails.
		• Rougher-Cleaner flotation (without gravity separation), with sizing of products, to produce samples for mineralogical investigation.
		• Mineral elemental concentrations and gold deportment was investigated using Laser Ablation examination by University of Tasmania.
		• QXRD Mineralogical assessment were used to estimate mineral contents for the test products, and, from this, to assess performance in terms of minerals as well as elements, including contributions to gold deportment. For both test samples, observations and calculations indicated a high proportion of native ('free') gold: 84.0% in RS01 and 82.1% in AP01.
		• Samples of size fractions of the three sulphide and gold containing flotation products from the Rougher-Cleaner test series were sent to MODA Microscopy for optical mineralogical assessment. Key observations were:
		    ○ The highest gold grade samples from each test series found multiple grains of visible gold which were generally liberated, with minor association with stibnite (antimony sulphide).
		    ○ Stibnite was highly liberated and was very 'clean' – 71.7% Sb, 28.3% S.
		    ○ Arsenopyrite was also highly liberated indicating potential for separation.
		    ○ Pyrite was largely free but exhibited some association with gangue minerals.

Further work	• *The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The Company drilled 30,000 m in 2023 and plans to continue drilling with 4 diamond drill rigs. The Company has stated it will drill 19,000 m of drilling from September 2023 to April 2024. The Company remains in an exploration stage to expand the mineralisation along strike and to depth. • See diagrams in presentation which highlight current and future drill plans.